

Appl. No. 10/535,070; Docket No. NL02 1185 US  
Amdt. dated July 5, 2006  
Response to Office Action of April 4, 2006

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### REMARKS/ARGUMENTS

Claims 1-13 are pending in the application.

Claim 1 is rejected under 35 U.S.C. §103(a) as being unpatentable over *Van Den Meerakker et al.* (Journal of the Electrochemical Society, 147 (7 pages) 2757-2761, herein after *Meerakker*) in view of *Grüning et al.* (Us 5,987,208 hereinafter *Grüning*), and further in view of *Bielgelsen et al.* (US 5,607,876 hereinafter *Bielgelsen*)

Claims 2-5 are rejected under 35 U.S.C. §103(a) as being unpatentable over, *Meerakke* in view of *Grüning*, as applied to claim 1, and further in view of *Kishi et al.* (US 2003/0098640 hereinafter *Kishi*).

Claims 6-13 are are rejected under 35 U.S.C. §103(a) as being unpatentable over, *Meerakke* in view of *Grüning*, and *Kishi*, as applied to claims 1-5, and further in view of *Dennis et al.* (US 2004/0076681 hereinafter, *Dennis*).

Applicants respectfully traverse the rejections presented in the Office Action.

### The Rejections of Claim 1

*Meerakker* is directed to "the process of photoanodic etch of deep pores in lightly doped n- Si wafers. . . (Abstract)" Upon a careful reading of the reference, it is noted that no discussion is presented "which will also result in the formation of nanowires if the etching is carried out as the diameter of the pores, arranged in a hexagonal array (page 2757, *Experimental*), is large enough to allow intersection of the pores leaving narrow regions between pores which will become the "nanowires" formed on the semiconductor material (silicon wafer) (Office Action, Page 2, Item 3)." *Meerakker* does not suggest or teach what the Office Action is assuming (i.e., "if the etching. . ."). Neither does *Meerakker* suggest as the Office Action alleges, "One of ordinary skill in the art would have been motivated to form nanowires because nanowires are useful for electro-optical and electromechanical devices."

In contrast, Applicants' invention addresses a long-felt need of overcoming a "disadvantage of the know method that the nanowires have an insufficiently uniform length, in particular if nanowires with a length substantially shorter than 100 um are formed.

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*Grüning* is directed to "an optical structure which is suitable as an optical waveguide or cavity comprises a carrier having a lattice structure with a photonic band gap and a defect region. The lattice structure comprises pores which have constriction and are arranged in a periodic grid pattern which is disturbed in the defect region. The optical structure can be produced by the electrochemical etching of silicon (Abstract)"

The Office Action suggests that *Grüning* "discloses a method for etching cylindrical cavities with variable diameter along the axis. . ." However, nowhere in *Grüning* it suggests or teaches the using of this etching method as it applies the Applicants' invention with respect to the making of nanowires.

*Biegelsen* is directed toward "...an electroluminescent structure and method of fabrication of that structure in materials which have an indirect bandgap in their bulk form. The processing steps can all be standard VLSI methods. Quantum columns, quantum wires or quantum dots may be formed, for example in an array, by masking, reactive ion etching and oxidation. When the semiconductor core is sufficiently thin, quantum mechanical confinement effects raise the energy and the radiative recombination efficiency of injected carriers. Tuning the core diameters allows selection of individual or multiple wavelength emission bands. (Abstract)"

Were the *Meerakker* reference modified as suggested by the Office Action or by combining it with the other cited references, the intended function of each reference would be destroyed. The CCPA and the Federal Circuit have consistently held that when a 103 rejection based upon a modification of a reference that destroys the intent, purpose or function of the invention disclosed in the reference, such a proposed modification is not proper and a *prima facie* case of obviousness can not be properly made. See *In re Gordon*, 733 F. 2d 900, 221 USPQ 1125 (Fed. Cir.1984)

Further, Applicant notes that the References are from different US Classifications. *Biegelsen* 437/129; *Kishi* 313/309; *Grüning* 385/146; *Dennis* 424/489 (to be discussed *infra*).

In light of the arguments presented, Applicants request that the rejection of claim 1 be withdrawn.

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#### The Rejections of Claims 2-5

*Kishi* is directed to a "hollow graphene sheet structure has at least one pair of hollow graphene sheet materials disposed in a continuous form, in which the adjacent ends of the pair of hollow graphene sheet materials are opposed to each other with a gap. (Abstract)."

Applicant notes that "a carbon nanotube comprises a graphene sheet (sheet-like structure of hexagonal network of carbon atoms) rounded in a hollow form (Paragraph 0004)."

In contrast, Applicants' claimed features relate to the dispersion of nanowires of materials other than carbon nanotubes. Consequently, there is no motivation to combine these references in an attempt to present a case of obviousness of Applicant's claimed features. As noted earlier with respect to the discussion of Claim 1, the References are from rather disparate technical arts each have particular processes and outcomes and as such, whose willy-nilly combination would vitiate the intent of each of them.

In light of the arguments presented, Applicants request that the rejection of claims 2-5 be withdrawn.

#### The Rejections of Claims 6-13

*Dennis* "relates to the nanotubes of various sized and composed of a wide variety of materials, or combination of material. The invention also describes the use of such nanotubes for the delivery of various payloads and, in particular, *for the in vivo delivery of bioactive substances* [emphasis added] (Abstract)."

The combining of *Dennis* with the previously cited references is not proper. *Dennis* is relevant to pharmaceutical applications. One skilled in the art would not be motivated to combine this reference, as with the others, to come up with Applicants' invention.

To reiterate, MPEP §2143.01 provides:

The mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination. *In re Mills*, 916 F.2d 680, 16 USPQ2d 1430 (Fed. Cir. 1990)

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In light of the arguments presented, Applicants request that the rejection of claims 6-13 be withdrawn.

Conclusion

Applicants believed they have addressed the Examiner's concerns. Therefore, the claims, as presented, are allowable of the cited references. A Notice of Allowance is earnestly requested.

Please charge any fees other than the issue fee and credit any overpayments to Deposit Account 14-1270.

Respectfully submitted,

Date: 05-July-2006

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